Leidy, Robert

From: Leidy, Robert

Sent: Thursday, January 30, 2014 12:24 PM

To: Julia Fonseca **Subject:** RE: Phil, Paper

Thanks Julia,

I would like to forward this information, including your email, on to Horst and others if that is Ok with you.

Best,

Rob

Robert A. Leidy, Ph.D.
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Wetlands Office (WTR-8)
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San Francisco, CA 94105
(415) 972-3463

From: Julia Fonseca [mailto:Julia.Fonseca@pima.gov]

Sent: Thursday, January 30, 2014 11:17 AM

To: Leidy, Robert Subject: Phil, Paper

Hi,

You requested an email for Phil Rosen: pcrosen@email.arizona.edu

Jean Calhoun mentioned the idea of calibrating and improving the models with time as a means of adaptive management. The problems with monitoring at distant locations like Empire Gulch are time lags, noise and most importantly, that the trajectory is set early on by groundwater depletion. The latter type of problem of using monitoring for adaptive management is discussed on pages 6-7 of the attached paper. The whole paper is really good perspective for understanding groundwater-dependent wetland depletion in the Western US.

They spent 15 to 20 years developing and arguing about groundwater models in the San Pedro River, during which the groundwater depletion continued. What was more effective was land acquisitions to reduce ag pumping by TNC, and groundwater recharge (albeit the effluent will degrade water quality and perhaps ultimately the biological integrity of the wetlands).

Julia Fonseca

Environmental Planning Manager

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